IT CORPORATION
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TRIP REPORT

CST SITE SEWER INVESTIGATION PERFORMED FEBRUARY 28, 2000

FIKE/ARTEL SUPERFUND SITE NITRO, WEST VIRGINIA

Prepared by

IT Corporation
2790 Mosside Boulevard
Monroeville, PA 15146-2792

August 1, 2000

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FIKE/ARTEL SUPERFUND SITE

INTRODUCTION

At the request of the Fike/Artel Trust (Trust), IT Corporation (IT) planned and initiated a meeting at the Fike Chemical Superfund Site (Site) on Monday, February 28, 2000 to discuss the Cooperative Sewage Treatment (CST) plant sewers and the potential for impacts to the soil, groundwater, and the Kanawha River. The purpose of this meeting was to bring closure to USEPA and WVDEP concerns over the potential of source material emanating from the sewers at the CST. The objective of the meeting was to ascertain from historical documents, photographs, and discussions with current and former contractors having knowledge of the Site, the past and current conditions of the Fike Sewers at the CST. In addition, a drawing illustrating the current knowledge of the sewer system at the CST and the outfall to the Kanawha River will be presented.

MEETING ATTENDEES AND ACTIVITIES

Wendell Barner, Joseph Bender (IT), Warren Smull (*de maximis, inc.*), Douglas Weeks (BB&L), and Buzz Cashion (US Army Corp of Engineers) met at the Site at noon on Monday, February 28, 2000. The following is a list of items which were discussed and reviewed.

1) Is there access to the Dana discharge pipe/outfall?

2) Do sewers leaving the CST pose potential contaminants?

3) Review of sewer records, maps, and photographs.

4) Determine if pipe or pipes from CST connect to the outfall, if it exists.

5) Does the sewer line from the CST (if it exists) connect to the joint Dana/Kincaid outfall?

6) Locate sewer segments from CST (if they exist) to the joint Dana/Kincaid outfall.

DISCUSSION

The meeting began by reviewing old sewer maps from previous investigations and historical documents. The maps reviewed are found in the 1990 NUS draft RI/FS report, the NEC (1978) report evaluating the CST, the OU-4 RI/FS Work Plan (1998), and drawings showing WWII era sewers. The participants of the meeting also discussed the previous work completed at the CST.

The following are accomplishments that have taken place with regard to the CST and the sewers.

1) All buildings at the CST were demolished and removed in 1997.

2) All lagoons at the CST were excavated until non-impacted soils were encountered. All excavated lagoon soils, sludges, and water were disposed of according to their waste characterization.

3) USEPA and other contractors conducted several sewer studies to determine the integrity of the sewer lines.

4) OHM was contracted to pressure grout the sewer line from Dana Trucking that connected to MH 1 (see Figure 1 attached). The Army Corp of Engineers provided project oversight during this activity.

5) Along the main sewer line from the Fike (Main) Site, between MH-1 and MH-5, EPA/OHM installed temporary plugs in all laterals to determine potential backup in the lateral lines. None were found and the sewer line was pressure cleaned and grouted to eliminate water flowing from the Fike Site to the CST.

6) Storm drains from Dana buildings that connected to the main sewer line were blocked. This was completed during the grouting of the main sewer line (Refer to No. 5).

7) Lines running in and out of lagoons (short or long runs) were removed.

8) No 33-inch line from Kincaid or others (as indicated on Figure 1) was found. This line is shown connecting to MH-1. MH-1 was blocked (see No. 5).

9) A sewer line from Lagoon 3 at the CST, leading to the sump was blocked and a section of the pipe removed from Lagoon 3.

10) The influent sump was pressure-cleaned and grouted. Any lines leading into the sump were blocked.

11) A 40-foot section of vitrified clay pipe (VCP) was replaced with PVC pipe. This sewer line is from Kincaid and was leaking into Lagoon 3 during excavation activities performed in 1997.

12) The existing outfall to the Kanawha River is covered under NPDES Permits for Dana and Kincaid The Dana permit number is WV0050130 and the Kincaid permit number is WV0000108 (see Photos Nos. 1 & 2).

After completing this review, the participants performed a site-walk. The purpose of the site-walk was to locate the CST outfall to the river, locate any access points along the outfall pipe.

The outfall is located near the PB&S/PAR Industrial Park property boundary at the river (see Photo No. 3). The outfall line runs back to the east, approximately 5-10 feet north and parallel of the PB&S/PAR fence line (on PAR property). There is access to the outfall, approximately mid-way from the river to Viscose Road. The outfall pipe is approximately 2 feet below ground surface. A concrete-block riser is constructed on top of a brick and mortar inlet box (see Photo No. 4). This structure is approximately 2 feet square and the outfall line is approximately 12-inches in diameter. There is no grate over this inlet. Two other access points were found near Viscose Road (see Figure 1); one approximately 100 feet west of the PB&S entrance (see Photo No. 5) and the other adjacent to Viscose Road. Both of these inlets have metal grates over them.

From the review of the previous investigation reports, maps, and drawings, and the discussions held between the attending parties, Figure 1 was prepared illustrating the sewers from Fike, Dana, and Kincaid. The following is a summary of this figure and current conditions.

- The sewer line leaving the Fike Site (from MH-5) and trends due west through the property owned by Dana Trucking has been blocked or plugged from MH-5 to MH-1. MH-1 is located to the south of the CST property on Dana property.

- The sump at the CST was steam-cleaned and filled with grout.

- The original sewer line from MH-1 to the outfall is shown as the bypass line. This line was plugged with concrete prior to 1988.

- A 33-inch sewer line connecting to MH-1 was blocked.

- The sewer line from Kincaid runs along the western side of the CST and then into a junction box before crossing Viscose Road and connecting into the joint outfall line. The original pipe is 8-inch vitrified clay pipe (VCP) and was leaking into Lagoon 3 while excavation of the Lagoon was performed, causing the sidewall to collapse. A 40-foot section of this line was repaired, replacing the VCP with PVC pipe. This line is still in use.

- The line from the sump and leading to Lagoon 1 was a force main. Wastewater that flowed to the sump was pumped to Lagoon 1. This line was removed during decommission and demolition activities at the CST.

- After wastewater was treated, the effluent discharged to the junction box and into the outfall.

- A line from Dana, located on the north side of the CST, is directed to the junction box (see Photo No. 6) and then into the outfall line. This line is still in use.

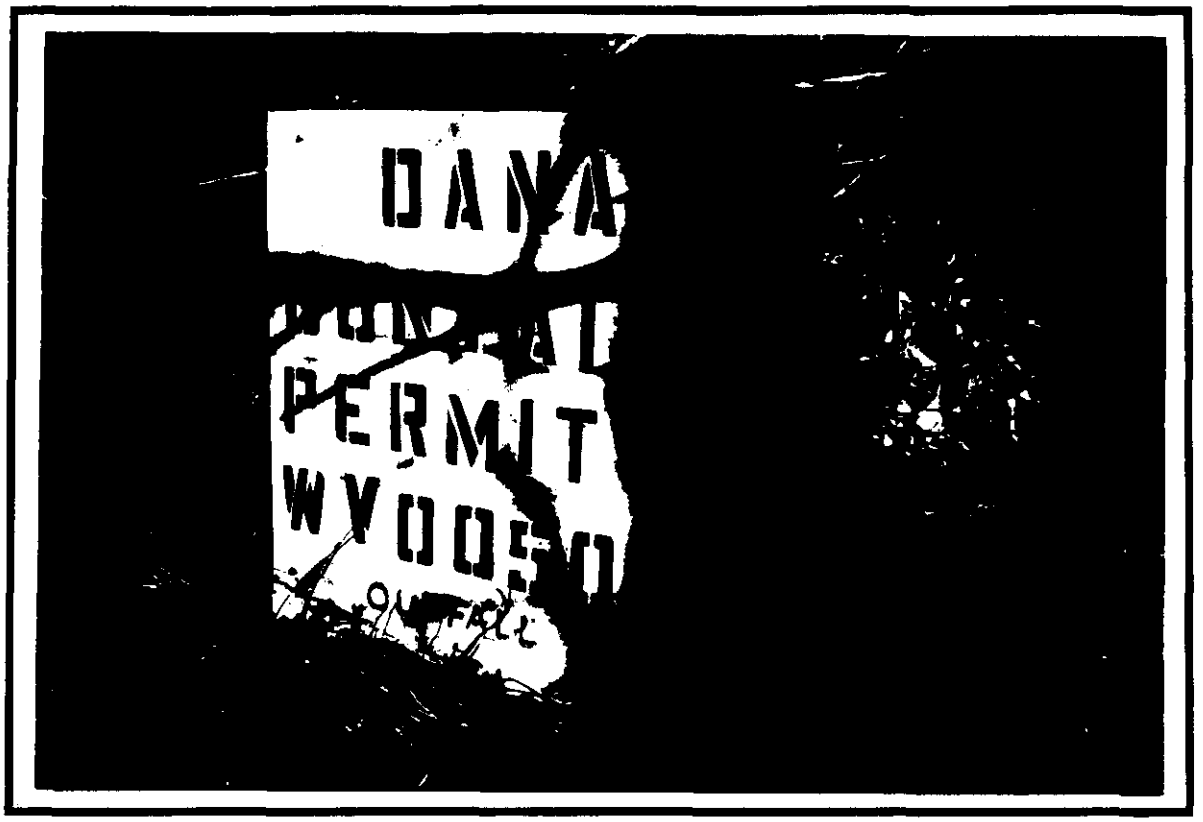
- When EPA took over the CST, treated wastewater was discharged through a flexible hose to the roadside ditch located on the west side of the CST Lagoons, then flowed under Viscose Road through a 12-inch line into the outfall. Photograph No. 7 shows the ditch (across Viscose Road from the CST) where effluent was drained, the headwall (upper right hand quarter of photo) where the water flows into a 12-inch pipe that travels under the access road to PB&S and into the outfall pipe. In foreground, the inlet shown connects to the outfall.

- Dana and Kincaid are the only known current users/contributors to this outfall.

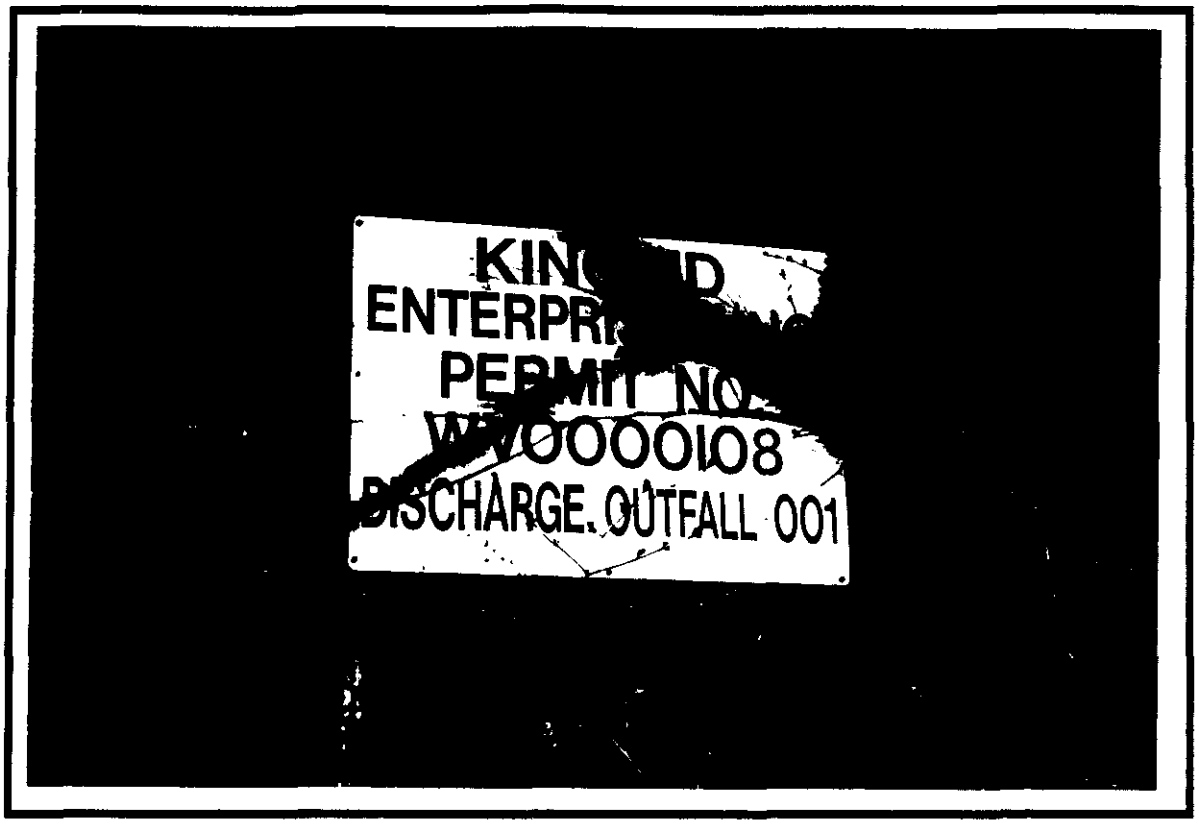
- Surface water runoff also runs into sewer via drainage ditches along Viscose Road and open inlets to the outfall.

CONCLUSION

Based on the information provided above, the only potential area of concern is a small section of sewer line that was not removed or investigated. This small section of sewer line is between MH-1 and the concrete sump near the southwest corner of the CST. It is known that sludge-like material was discovered during the drilling of MW-117 S/D in the southwest corner of the CST during the OU-4 remedial investigation activities. This material was tested for TCLP constituents. The material and impacted soils were disposed of as non-hazardous wastes. There are several inlets and the stormwater drainage ditch along Viscose Road that run-off and any association sediment and/or other non-site related constituents can flow into and discharge to the Kanawha River. All other known sources from the Fike sewers have been removed or closed.



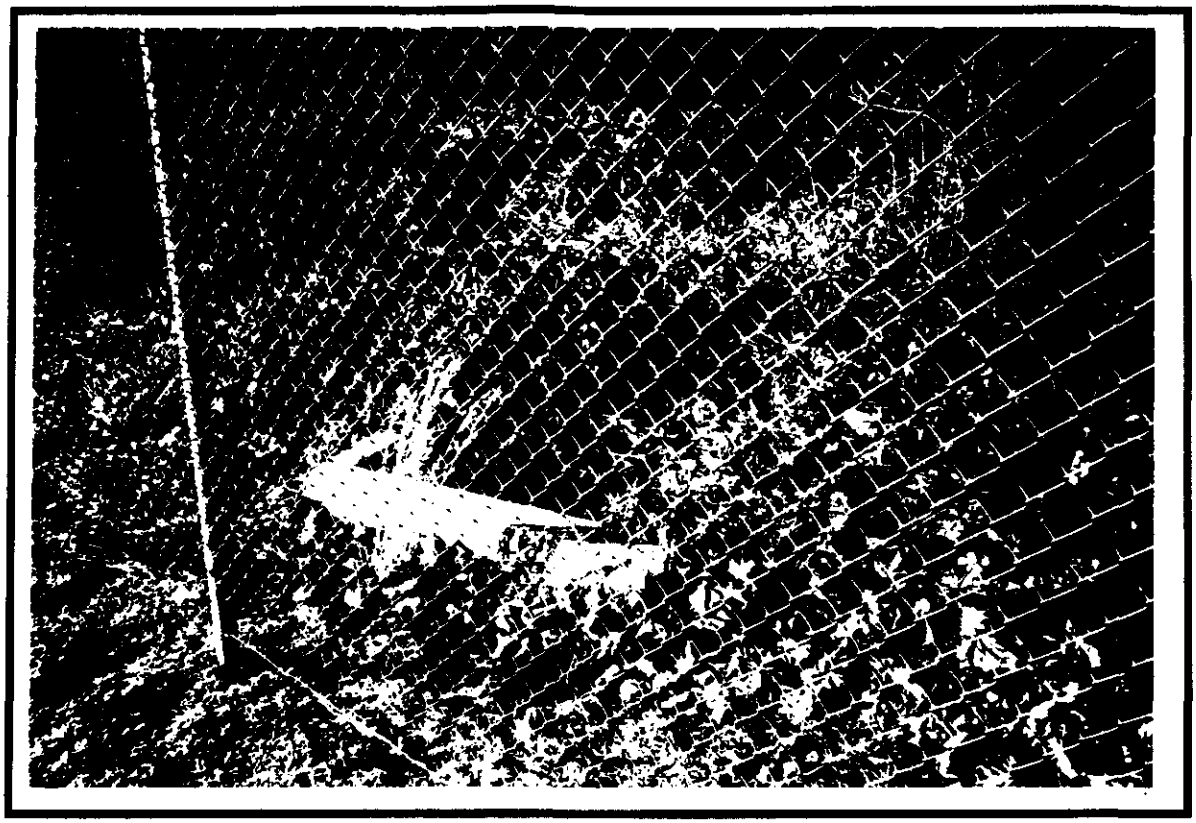
PHOTOGRAPH #1
DANA NPDES PERMIT #WV0050130



PHOTOGRAPH #2
KINCAID NPDES PERMIT #WV 0000108

PHOTOGRAPH #3

JOINT DANA/KINCAID OUTFALL AT KANAWHA RIVER PHOTOGRAPH IS LOOKING EAST

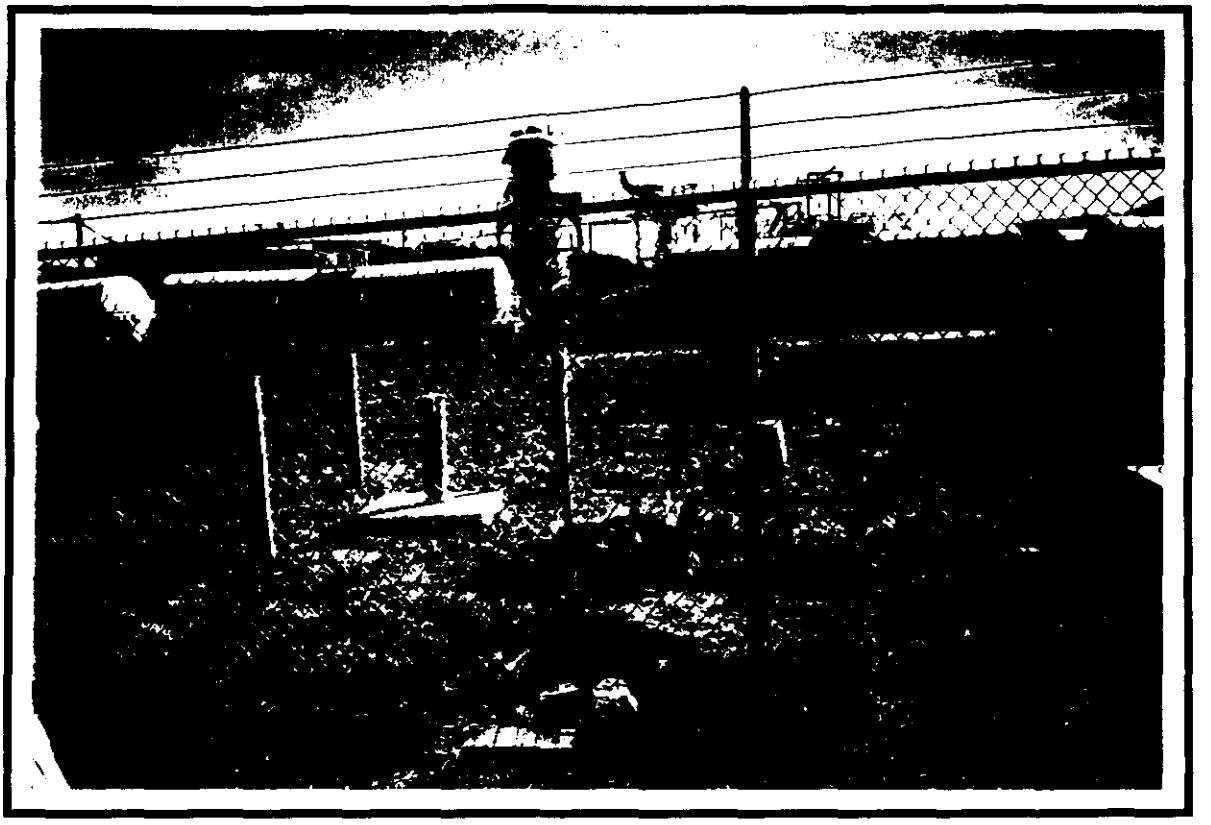


PHOTOGRAPH #4

INLET BOX APPROXIMATELY HALF WAY BETWEEN VISCOSE ROAD AND KANAWHA RIVER BOX IS ON PAR INDUSTRIAL PARK PROPERTY

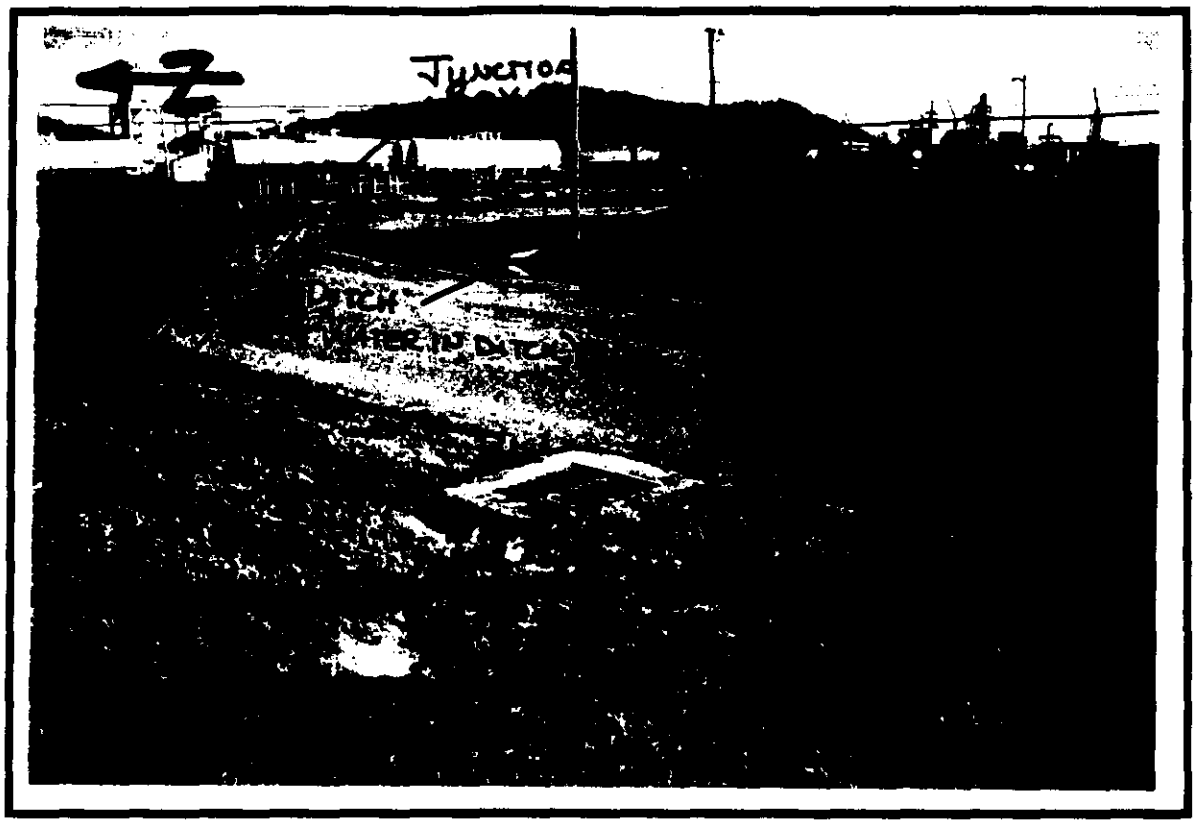
PHOTOGRAPH #5

INLET BOX ON PAR INDUSTRIAL PARK PROPERTY NEAR VISCOSE ROAD CST IS IN THE UPPER PORTION OF PHOTO APPROXIMATE LOCATION OF SEWER PIPE AND FLOW DIRECTION



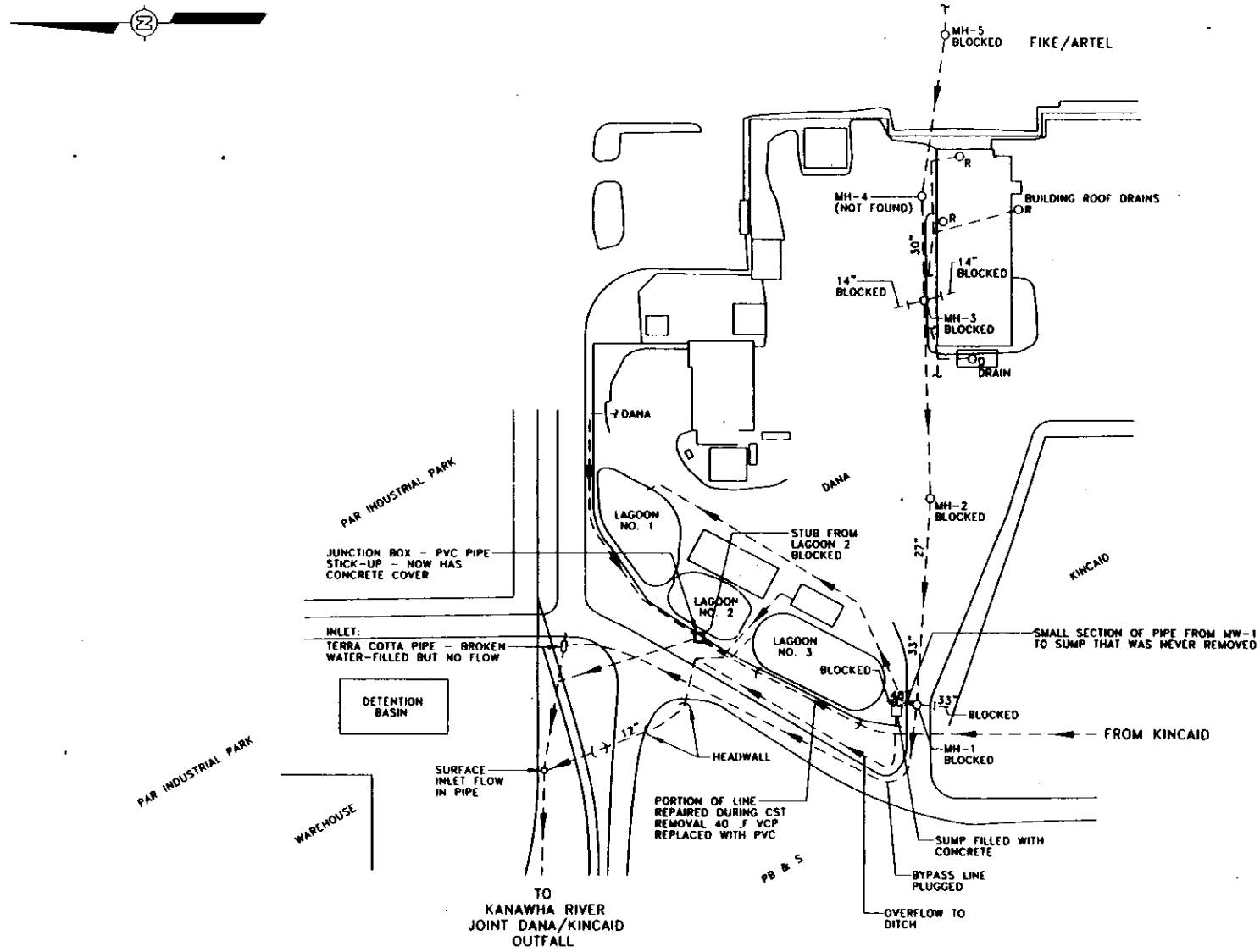
PHOTOGRAPH #6

JUNCTION BOX IS LOCATED AT BOTTOM OF PHOTOGRAPH NEAR WELL MW-116S/D



PHOTOGRAPH #7

SHOWS LOCATION OF JUNCTION BOX (FOREGROUND) ADJACENT TO PB & S ENTRANCE DRIVE, STORMWATER IN DITCH THAT DRAINS INTO THIS INLET AND APPROXIMATE LOCATIONS OF OTHER SEWER LINES TO THE OUTFALL PIPE



SOURCES:
DRAFT RI NUS, 1990
INFORMATION SUMMARY - WWI ERA SEWERS, IT CORP. 1999.

AR302968

SCALE
0 100 200 FEET

IT CORPORATION

FIKE CHEMICAL SUPERFUND SITE
NITRO, WEST VIRGINIA

FIGURE 1
CST SEWERS
FIKE CHEMICAL SUPERFUND SITE
NITRO, WEST VIRGINIA

DRAWING NUMBER 892192-B8
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DRAWN BY B. Snyder 3/1/00
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IT Corporation
2790 Mosside Boulevard
Monroeville, PA 15146-2792
Tel. 412.372.7701
Fax. 412.373.7135

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FC-877

August 1, 2000

Mr. Sunil Shah
Union Carbide Corporation
Building 2000
3200-3300 Kanawha Turnpike
S. Charleston, WV 25303

Subject: **Fike/Artel Superfund Site**
Nitro, West Virginia
CST Sewer Trip Report

Dear Sunil:

Enclosed is the CST Sewer Trip Report performed February 28, 2000. The purpose of this report is to discuss the CST sewers and the potential for impacts to the soil, groundwater and the Kanawha River. The meeting was held with current and former contractors having knowledge of the Site and the work performed in conjunction with the CST and related sewers. This report provides our current understanding of the sewer system at the CST and the outfall to the Kanawha River.

If you have any questions regarding this report, please contact me at (412) 380-4094.

Sincerely,

Wendell L. Bamer, P.G., C.P.G.
Senior Geologist

WLB/bam

Enclosure

cc: Ronald J. Buchanan, Ph.D. – DuPont
Dominic DeAngelis – Mobile Corporation
Mark C. Flickinger – ARCO
Richard A. Jacobs – PPG Industries
Arthur M. McClain, P.E. – Union Carbide Corp.
Raymond C. Merrell – Cytec Industries, Inc.
Joel E. Robinson – Bayer Corporation
Warren L. Smull – *de maximis, inc.*
Taunya Howe – U.S. Army Corp of Engineers, Omaha
Nancy Snyder – Sunoco, Inc.
Harry S. Stollmack – Brown & Root Services Corp.
Anthony C. Tuk – Solutia Inc.
Ken Walanski – Morton International, Inc.
Kirk Kessler – GeoSyntec Consultants
Catherine Trinkle, Esq., - Pitney, Hardin, Kipp & Szuch
Timothy Bingman, D.A.B.T., - DuPont Specialty Chemicals
K.C. Lee, Ph.D., - Union Carbide Corp.
James Sherman, Ph.D., - Solutia, Inc.
Kate Lose, USEPA Region III
Mark Slusarski, WVDEP